

NONVOLATILE SEMICONDUCTOR MEMORY DEVICE AND METHODS FOR
OPERATING AND PRODUCING THE SAME

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ABSTRACT OF THE DISCLOSURE

A nonvolatile semiconductor memory device with high
reliability (free from troubles in storing data), a high
charge injection efficiency, and enabling parallel
10 operation in a VG cell array, includes channel forming
regions, a charge storing film which consists of stacked
dielectric films and is capable of storing a charge, two
storage portions forming parts of the charge storing film
and overlapping the channel forming regions, a single
15 layer dielectric film between the storage portions and in
contact with the channel forming region, a control gate
electrode on the single layer dielectric film, and a
memory gate electrode on the storage portions.